

ABSTRACT

There is disclosed a variable capacitance circuit which comprises: first to Nth variable capacitance elements C1-CN (N is an odd number) sequentially connected in series between an input terminal I and an output terminal O, whose capacitances change depending on voltage applied thereto; an ith bias line on the input terminal side provided between an input terminal portion of the first variable capacitance element and a connection point between a 2ith variable capacitance element and a (2i+1)th variable capacitance element; and an ith bias line on the output terminal side provided between an output terminal portion of the Nth variable capacitance element and a connection point between a (2i-1)th variable capacitance element and the 2ith variable capacitance element, where N and i are integers satisfying $N=2n+1$, $n \geq 1$, $1 \leq i \leq n$. With the arrangement of the variable capacitance circuit, it is possible to provide a variable capacitance thin film capacitor device whose capacitance change ratio is small in a radio frequency region and large in a direct current region can be provided. Furthermore, a radio frequency device utilizing the variable capacitance thin film capacitor device can be provided.